

Exhibit 6

UNCATEGORIZED

One Number to Rule Them All

Google Voice routes calls from multiple lines, transcribes voice mail, and gives you one phone number for life.

By John Brandon

April 2, 2009

Call it the “one number to rule them all” service. Google Voice, which goes live in a few weeks, is supposed to let friends, relatives, and business contacts find you whether you’re at your desk, on a business trip, or vacationing in Peru. Tests carried out over the past few days suggest that, despite a few glitches, it could well live up to this promise.



Message me: Google Voice is a unified messaging service—use one number for all of your phones.

Users will soon be able to register, sign up for a phone number in a local area code, and add multiple landline and cell-phone numbers to an account. When someone calls a Google Voice phone number, all the registered phones ring at the same time.

The service takes several telephony technologies—voice-over-Internet Protocol (VoIP), voice transcription, and call routing—and connects them to the Web. Other Internet phone services let you play voice-mail messages on a computer or record calls, but Google Voice is a step towards unified communication. It’s the voice equivalent of an e-mail address. Once you register a number, the idea is that you never have to worry about which phone you are using, even if you switch offices, homes, or cell phones.

Google Voice doesn’t actually host phone calls. Instead, when you make a call, the service calls your own phone, and then dials the number you want. Like other Google services, it taps a vast cluster of computers to offer extra services, such as voice mail and call recording. Because it is entirely IP-based, the service is always “on the line,” meaning you can access it at any time, for example, by pressing 4 to record a current call.

THE DOWNLOAD

Cookie Policy

We use cookies to give you a more personalized browsing experience and analyze site traffic. [See our cookie policy](#)

[Accept all cookies](#)

[Cookies settings](#)

[Sign up](#)



POPULAR

The metaverse has a groping problem already

Tanya Basu

How censoring China’s open-source coders might backfire

Zeyi Yang

The big new idea for making self-driving cars that can go anywhere

Will Douglas Heaven

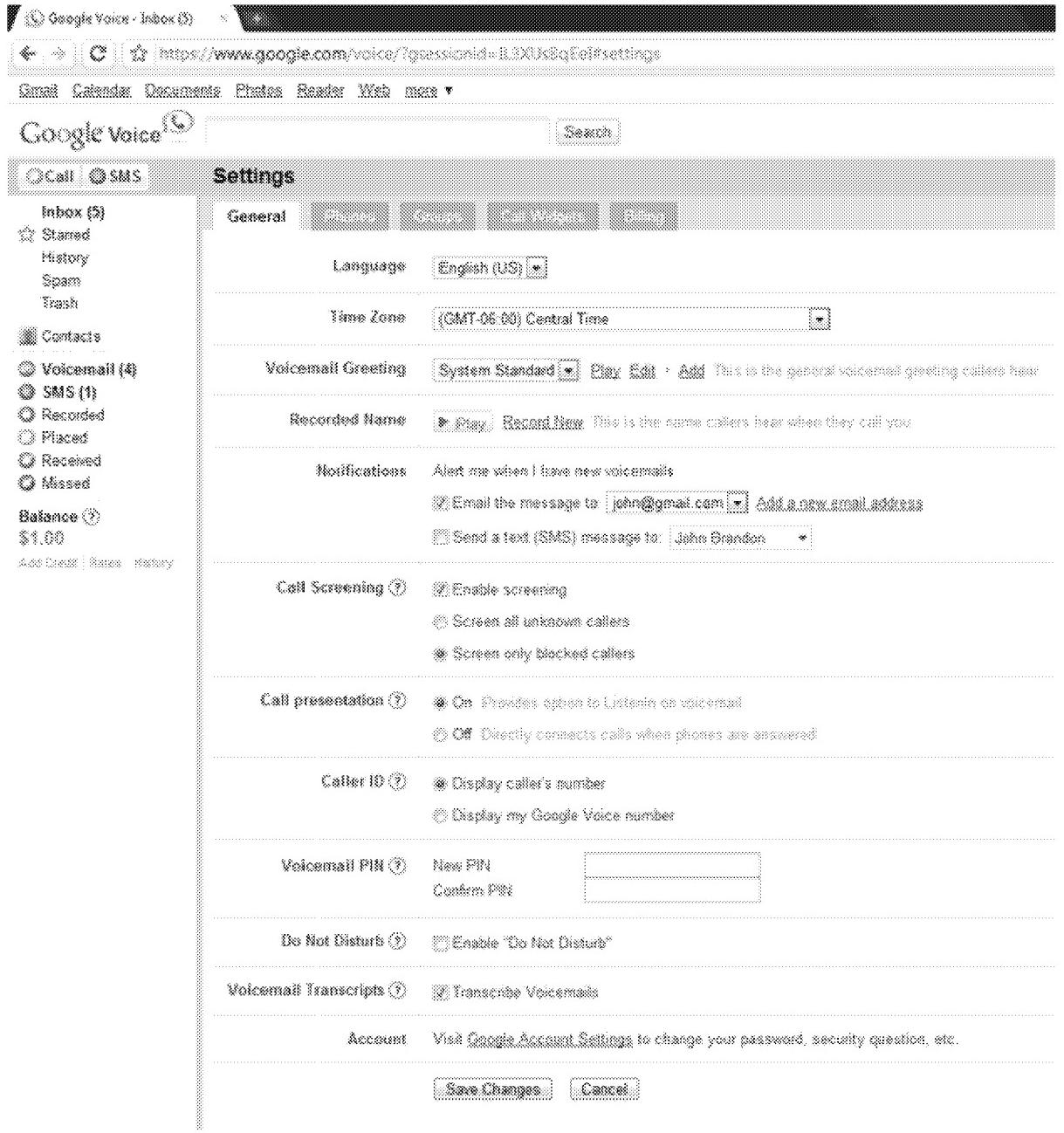
How to poison the data that Big Tech uses to surveil you

Karen Hao

"The extra piece of equipment is a VoIP gateway, which interconnects the PSTN [a standard telephone line] and SIP [the digital line] services. I would expect their data centers will have large racks of these," says Rob Enderle, founder of the research company [Enderle Group](#). "Google Voice translates an SIP address into a phone line, converting the digital data stream to an analog stream and then allowing the line to connect."

Time delays, also known as latency, remain a serious problem with VoIP, but if any company can handle tremendous call volumes, expand computer clusters quickly, and reduce latency issues, it is Google.

Google Voice is also largely about unification. No matter which phone you use, there is one portal for all voice-mail messages. You can play them on the Web, save them as MP3 files, and even post a voice-mail message on a website using an HTML embed feature. Conference calls are also easy: just answer an incoming call to add it to the current one.



Options, options: Google Voice users can quickly enable or disable any of their phones.

Phone number availability is very good, even in remote areas. During *Technology Review's* test period, there were never any connection problems, even with Google Voice originating calls from Google data centers. Enderle says there may be issues with reliability in the future, noting that Gmail does not have a great reputation for being available at all times.

When a caller leaves a voice mail, Google Voice automatically records and transcribes the message, then sends the transcription to you via e-mail. The transcription service uses technology developed originally for voice search. Enderle notes that the voice-recognition service has a hard time with accents and ambient noise, and does not interpret local vernacular—words not found in the dictionary—accurately. In our tests, most transcriptions were about 50 percent accurate—the service missed common phrases such as “checking in with you” and failed to understand some city names and more-technical words, such as “convergence.” The speech-to-text engines employed will likely improve over time. One complaint: you can record incoming calls, but not placed calls. And recorded calls cannot be transcribed—transcription only works for voice mail.

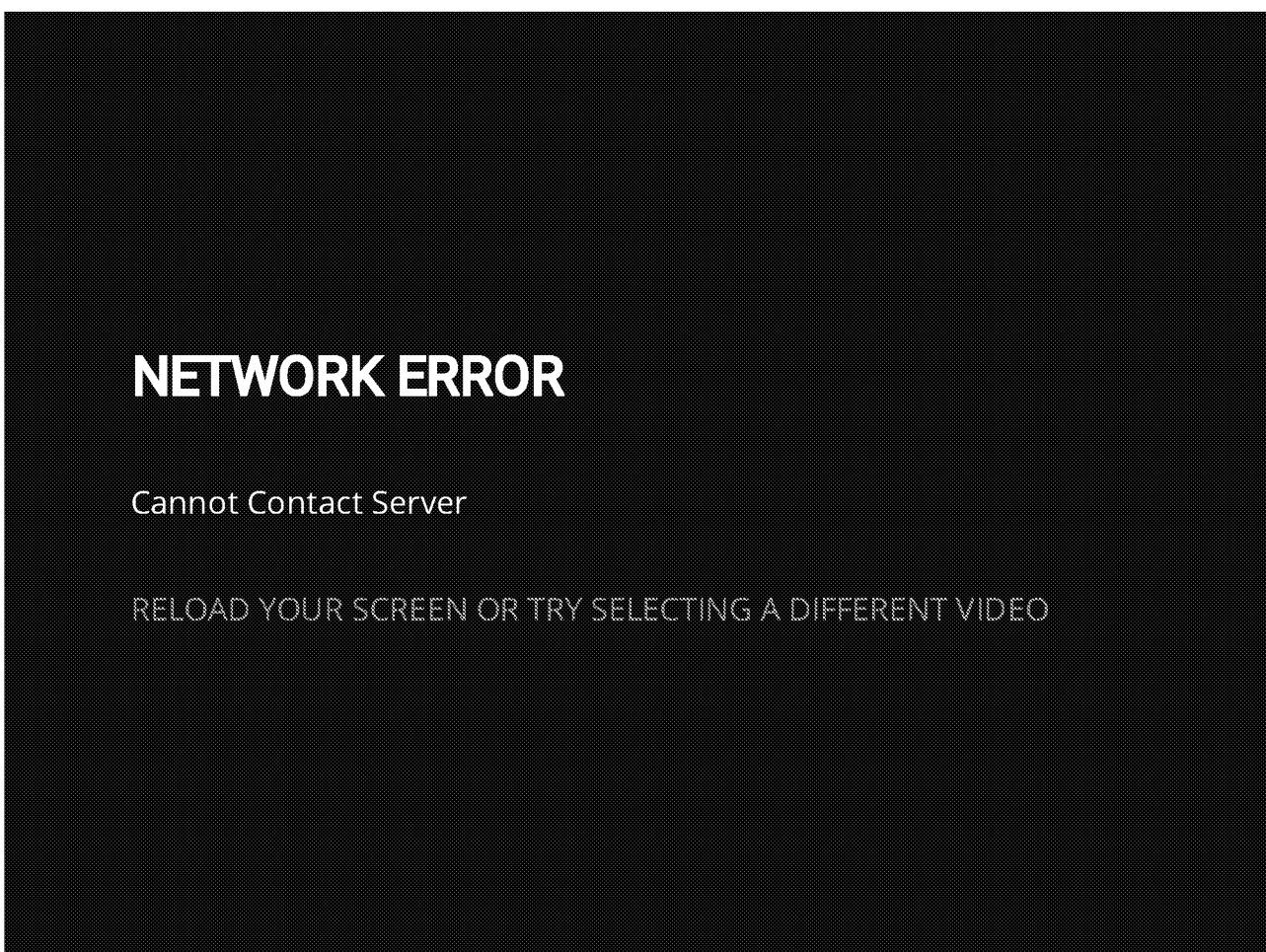
Google Voice lets you send and receive text messages—again, by routing them between existing carriers. You can view a list of every SMS message

Multimedia

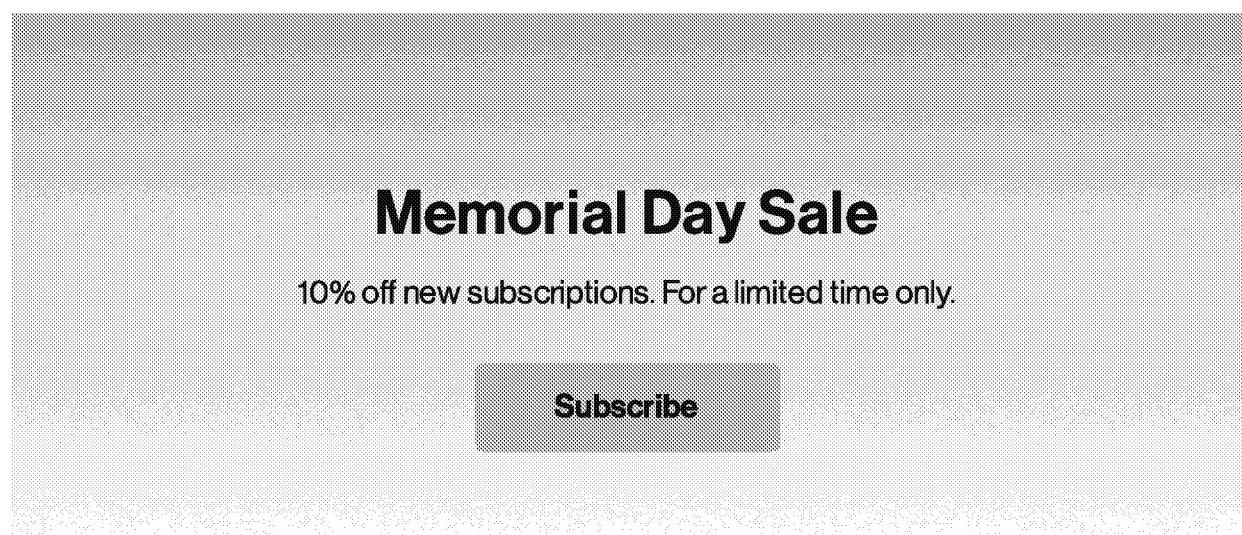
[See how Google Voice works on G1.](#)

Google Voice has room for improvement, of course. You can't "daisy chain" phone numbers so that the service tries one number, then another. Security is another potential issue. Recently, hackers showed that a caller could use Google Voice to tap into the services on a cell phone by spoofing the codes used to identify calls and messages sent over the Internet. Sara Jew-Lim, a Google spokesperson, says the company plans to add a default PIN to Google Voice; currently, a PIN is available only as an option.

Overall, Google Voice is worth considering for anyone who wants to view call transactions on the Web, uses multiple phones during the day, or needs to record phone conversations. It's a handy way to unify all voice communication, while trusting that the number you pick today will be yours for years to come.

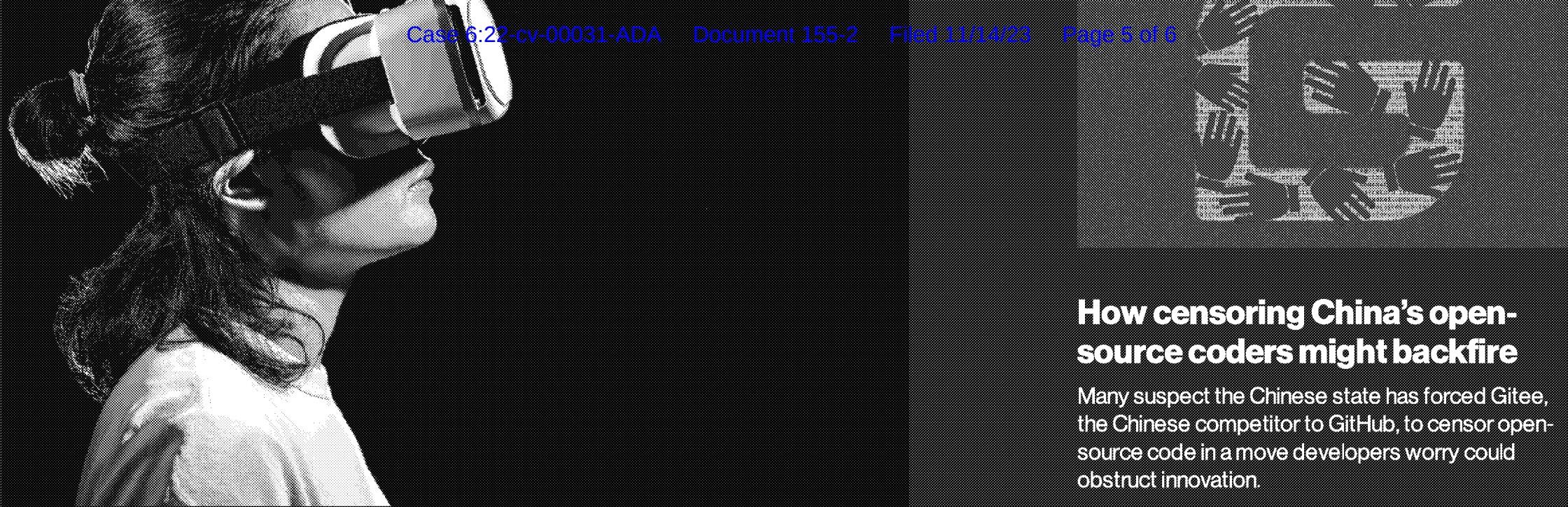


by John Brandon



KEEP READING

MOST POPULAR



How censoring China's open-source coders might backfire

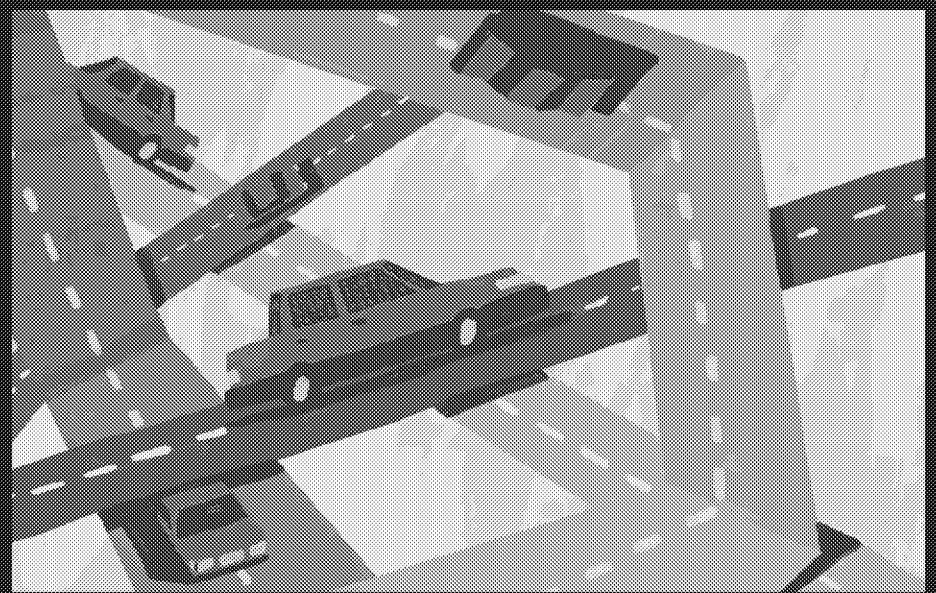
Many suspect the Chinese state has forced Gitee, the Chinese competitor to GitHub, to censor open-source code in a move developers worry could obstruct innovation.

By Zeyi Yang

The metaverse has a groping problem already

A woman was sexually harassed on Meta's VR social media platform. She's not the first—and won't be the last.

By Tanya Basu



The big new idea for making self-driving cars that can go anywhere

The mainstream approach to driverless cars is slow and difficult. These startups think going all-in on AI will get there faster.

By Will Douglas Heaven

Inside Charm Industrial's big bet on corn stalks for carbon removal

The startup used plant matter and bio-oil to sequester thousands of tons of carbon. The question now is how reliable, scalable, and economical this approach will prove.

By James Temple

STAY CONNECTED



Illustration by Rose Wong

Get the latest updates from MIT Technology Review

Discover special offers, top stories, upcoming events, and more.

Enter your email



[Privacy Policy](#)



MIT Technology Review

Our in-depth reporting reveals what's going on now to prepare you for what's coming next.

Subscribe to support our journalism.



Cover Art by Michael Byers
©2022 MIT Technology Review

[About us](#)

[Help & FAQ](#)

[Careers](#)

[My subscription](#)

[Custom content](#)

[Editorial guidelines](#)

[Advertise with us](#)

[Privacy policy](#)

[International Editions](#)

[Cookie statement](#)

[Republishing](#)

[Terms of Service](#)

[MIT News](#)

[Contact us](#)

[Back to top ↑](#)

